

Notice of Allowability	Application No.	Applicant(s)	
	10/731,613	TODD, STEPHEN	
	Examiner	Art Unit	
	Lev I. Iwashko	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/17/2006.
2. ☒ The allowed claim(s) is/are 1-72.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>6/27/2006</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>5/2/2006</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Richard Giunta (No. 36,149) on 6/26/2006.
3. The following are Claims 1-78 as they should appear in amended form:
 1. (Amended) A method of processing data in a computer system comprising at least one host and at least one storage system which stores data for the at least one host, the method comprising acts of:
 - (a) receiving, at the storage system, a first request from the at least one host to access a unit of data stored on the at least one storage system; [and]
 - (b) in response to the first request, returning to the at least one host information related to where the unit of data is physically stored on the at least one storage system; and
 - (c) subsequent to the act (b), receiving, at the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system.
 2. (Amended) The method of claim 1, wherein the storage system is a content addressable storage system and the at least one host accesses data units stored on the at least one storage system using content addresses generated based on the content of the data units, and wherein the first request received in the act (a) identifies the unit of data using a content address.

3. (Amended) The method of claim 1, further comprising an act [(c), subsequent to the act (b) of receiving, at the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system] of using the information related to where the unit of data is physically stored on the storage system received in the act (c) to retrieve the unit of data.
4. (Original) The method of claim 1, wherein the act (a) further comprises an act of receiving a query request that specifies at least one criterion and requests units of data stored on the storage system that satisfy the at least one criterion-based.
5. (Original) The method of claim 4, wherein the at least one criterion includes a time period in which units of data were stored on the storage system.
6. (Amended) The method of claim 1, wherein the first request to access the unit of data includes a request to write the unit of data, and wherein the act (a) further comprises an act of receiving the unit of data from the host.
7. (Original) The method of claim 6, further comprising an act of returning, to the host, an address associated with the unit of data.
8. (Amended) The method of claim 7, further comprising an act [(c), subsequent to the act (b), of receiving, at the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system.] of using the information related to where the unit of data is physically stored on the storage system received in the act (c) to retrieve the unit of data.
9. (Original) The method of claim 1, wherein the storage system includes a plurality of storage nodes, and wherein the information related to where the unit of data is

physically stored on the storage system includes information identifying the ones of the plurality of storage nodes on which the unit of data is stored.

10. (Original) The method of claim 9, wherein at least one of the plurality of storage nodes includes a plurality of disks, and wherein the information related to where the unit of data is physically stored on the storage system includes information related to on which of the plurality of disks the unit of data is stored.

11. (Amended) At least one computer readable medium encoded with instructions that, when executed on a computer system perform a method of processing data, wherein the computer system comprises at least one host and at least one storage system which stores data for the at least one host, the method comprising acts of:

(a) receiving, at the storage system, a first request from the at least one host to access a unit of data stored on the at least one storage system; [and]

(b) in response to the first request, returning to the at least one host information related to where the unit of data is physically stored on the at least one storage system; and

(c) subsequent to the act (b), receiving, at the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system.

12. (Amended) The at least one computer readable medium of claim 11, wherein the storage system is a content addressable storage system and the at least one host accesses data units stored on the at least one storage system using content addresses generated based on the content of the data units, and wherein the first request received in the act (a) identifies the unit of data using a content address.

13. (Amended) The at least one computer readable medium of claim 11, wherein the method further comprises an act [(c), subsequent to the act (b) of receiving, at the at least one storage system, a second request to access the unit of data, the second request

including the information related to where the unit of data is physically stored on the storage system] of using the information related to where the unit of data is physically stored on the storage system received in the act (c) to retrieve the unit of data.

14. (Original) The at least one computer readable medium of claim [13] 12, wherein the act (a) further comprises an act of receiving a query request that specifies at least one criterion and requests units of data stored on the storage system that satisfy the at least one criterion.

15. (Original) The at least one computer readable medium of claim 14, wherein the at least one criterion includes a time period in which units of data were stored on the storage system.

16. (Amended) The at least one computer readable medium of claim 11, wherein the first request to access the unit of data includes a request to write the unit of data, and wherein the act (a) further comprises an act of receiving the unit of data from the host.

17. (Original) The at least one computer readable medium of claim of claim 11, wherein the method further comprises an act of returning, to the host, an address associated with the unit of data.

18. (Amended) The at least one computer readable medium of claim 17, wherein the method further comprises an act [(c), subsequent to the act (b), of receiving, at the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system] of using the information related to where the unit of data is physically stored on the storage system received in the act (c) to retrieve the unit of data.

19. (Original) The at least one computer readable medium of claim 11, wherein the storage system includes a plurality of storage nodes, and wherein the information related

to where the unit of data is physically stored on the storage system includes information identifying the ones of the plurality of storage nodes on which the unit of data is stored.

20. (Original) The at least one computer readable medium of claim 19, wherein at least one of the plurality of storage nodes includes a plurality of disks, and wherein the information related to where the unit of data is physically stored on the storage system includes information related to on which of the plurality of disks the unit of data is stored.

21. (Amended) A storage system for use in a computer system that includes at least one host, wherein the storage system stores data for the at least one host, the storage system comprising:

at least one storage device to store data received from the at least one host; and

at least one controller that receives a first request from the at least one host to access a unit of data stored on the storage system and in response to the first request, returns to the at least one host information related to where the unit of data is physically stored on the storage system;

wherein the at least one controller, subsequent to returning to the at least one host information related to where the unit of data is physically stored, receives a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system.

22. (Amended) The storage system of claim 21, wherein the storage system is a content addressable storage system, wherein the at least one host accesses data units stored on the at least one storage system using content addresses generated based on the content of the data units, and wherein the first request from the at least one host identifies the unit of data using a content address.

23. (Amended) The storage system of claim 21, wherein the at least one controller[, subsequent to returning to the at least one host information related to where the unit of data is physically stored, receives a second request to access the unit of data, the second

request including the information related to where the unit of data is physically stored on the content addressable storage system] uses the information received in the second request to retrieve the unit of data.

24. (Amended) The storage system of claim [23] 21, wherein the at least one controller receives a query request that specifies at least one criterion and requests units of data stored on the storage system that satisfy the at least one criterion, and wherein the at least one controller processes the query request.

25. (Original) The storage system of claim 24, wherein the at least one criterion includes a time period in which units of data were stored on the storage system.

26. (Amended) The storage system of claim 21, wherein the first request to access the unit of data includes a request to write the unit of data, and wherein the at least one controller receives the unit of data from the at least one host.

27. (Original) The storage system of claim 26, wherein the at least one controller, subsequent to returning to the at least one host information related to where the unit of data is physically stored, returns to the at least one host an address associated with the unit of data.

28. (Amended) The storage system of claim 27, wherein the at least one controller[, receives a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system] uses the information received in the second request to retrieve the unit of data.

29. (Original) The storage system of claim 21, further comprising a plurality of storage nodes, wherein the information related to where the unit of data is physically stored on the content addressable storage system includes information identifying the ones of the plurality of storage nodes on which the unit of data is stored.

30. (Original) The storage system of claim 29, wherein at least one of the plurality of storage nodes includes a plurality of disks, and wherein the information related to where the unit of data is physically stored on the content addressable storage system includes information related to on which of the plurality of disks the unit of data is stored.

31. (Amended) A method of processing data in a computer system comprising at least one host and at least one storage system which stores data for the at least one host, the method comprising acts of:

(a) sending, to the at least one storage system, a first request to access a unit of data stored on the storage system; [and]

(b) receiving, from the at least one storage system, information related to where the unit of data is physically stored on the at least one storage system; and

(c) subsequent to the act (b), sending to the at least one storage system a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the at least one storage system.

32. (Amended) The method of claim 31, wherein the at least one storage system is a content addressable storage system and the at least one host accesses data units stored on the at least one storage system using content addresses generated based on the content of the data units, and wherein the first request sent in the act (a) identifies the unit of data using a content address.

33. (Cancelled).

34. (Amended) The method of claim [33] 31, wherein the act (a) further comprises an act of sending, to the at least one storage system, a query request that specifies at least one criterion and requests units of data stored on the storage system that satisfy the at least one criterion based on the said data.

35. (Original) The method of claim 34, wherein the at least one criterion includes a time period in which units of data were stored on the storage system.
36. (Amended) The method of claim 31, wherein the first request to access the unit of data includes a request to write the unit of data, and wherein the act (a) further comprises an act of sending the unit of data to the at least one storage system.
37. (Amended) The method of claim [33] 31, wherein the first request to access the unit of data includes a request to read the unit of data, and wherein the method further comprises an act of receiving the unit of data from the at least one storage system.
38. (Original) The method of claim 37, wherein the act (a) further comprises an act of sending, to the at least one storage system, an address associated with the unit of data.
39. (Amended) At least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data, wherein the computer system comprises at least one host and at least one storage system which stores data for the at least one host, the method comprising acts of:
- (a) sending, to the at least one storage system, a first request to access a unit of data stored on the storage system; and
 - (b) receiving, from the at least one storage system, information related to where the unit of data is physically stored on the at least one storage system; and
 - (c) subsequent to the act (b), sending to the at least one storage system a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the at least one storage system.
40. (Amended) The at least one computer readable medium of claim 39, wherein the at least one storage system is a content addressable storage system and the at least one host accesses data units stored on the at least one storage system using content addresses

generated based on the content of the data units, and wherein the first request sent in the act (a) identifies the unit of data using a content address.

41. (Cancelled).

42. (Amended) The at least one computer readable medium of claim [41] 39, wherein the act (a) further comprises an act of sending, to the at least one storage system, a query request that specifies at least one criterion and requests units of data stored on the storage system that satisfy the at least one criterion.

43. (Original) The at least one computer readable medium of claim 42, wherein the at least one criterion includes a time period in which units of data were stored on the storage system.

44. (Amended) The at least one computer readable medium of claim 39, wherein the first request to access the unit of data includes a request to write the unit of data, and wherein the act (a) further comprises an act of sending the unit of data to the at least one storage system.

45. (Amended) The at least one computer readable medium of claim [41] 39, wherein the first request to access the unit of data includes a request to read the unit of data, and wherein the method further comprises an act of receiving the unit of data from the at least one storage system.

46. (Original) The at least one computer readable medium of claim 45, wherein the act (a) further comprises an act of sending, to the at least one storage system, an address associated with the unit of data.

47. (Amended) A host computer for use in a computer system that includes the host computer and at least one storage system, the host computer comprising:

at least one storage device; and

at least one controller that:

sends, to the at least one storage system, a first request to access a unit of data stored on the at least one storage system; and

in response to the first request, receives from the at least one storage system, information related to where the unit of data is physically stored on the at least one storage system and stores the information in the at least one storage device;

wherein the at least one controller, subsequent to receiving the information related to where the unit of data is physically stored, sends, to the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the at least one storage system.

48. (Original) The host computer of claim 47, wherein the at least one storage system is a content addressable storage system and the at least one host accesses data units stored on the at least one storage system using content addresses generated based on the content of the data units, and wherein the request sent to the at least one storage system identifies the unit of data using a content address.

49. (Cancelled).

50. (Amended) The host computer of claim [49] 47, wherein the first request to access the unit of data includes a query request that specifies at least one criterion and requests units of data stored on the storage system that satisfy the at least one criterion.

51. (Original) The host computer of claim 50, wherein the at least one criterion includes a time period in which units of data were stored on the storage system.

52. (Amended) The host computer of claim 47, wherein the first request to access the unit of data includes a request to write the unit of data, and wherein the at least one controller sends the unit of data to the at least one storage system.

53. (Amended) The host computer of claim 47, wherein the first request to access the unit of data includes a request to read the unit of data, and wherein the at least one controller sends the unit of data to the at least one storage system.

54. (Amended) The host computer of claim 53, wherein the at least one controller[,] sends to the at least one storage system an address associated with the unit of data.

55. (Amended) A method of processing data in a computer system comprising at least one host and at least one storage system, the method comprising acts of:

(a) receiving, at the at least one storage system, a first request from the at least one host to access a unit of data, the request having an identifier that can be used to access the unit of data; [and]

(b) in response to the first request, returning to the at least one host an identifier that can be used to access the unit of data and additional information, separate from the identifier, related to where the unit of data is physically stored on the at least one storage system; and

(c) receiving a second request to access the unit of data, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system.

56. (Amended) The method of claim 55, wherein the first request to access the unit of data includes a request to write the unit of data and the act (a) further comprises acts of receiving the unit of data from the host and storing the unit of data at a storage location of the storage system.

57. (Amended) The method of claim 55, further comprising an act of [receiving a second request to access the unit of data, the second request including the identifier associated with the unit of data and the information related to where the data is physically

stored on the storage system] using the information related to where the data is physically stored on the storage system received in the act (c) to retrieve the unit of data.

58. (Original) The method of claim 55, wherein the at least one storage system includes a plurality of storage nodes and wherein the information related to where the unit of data is physically stored on the at least one storage system includes information related to on which of the plurality of storage nodes the unit of data is stored.

59. (Original) The method of claim 55, wherein the at least one storage system includes a plurality of storage nodes, at least some of the plurality of storage nodes including a plurality of disks, and wherein the information related to where the unit of data is physically stored on the storage system includes information related to on which of the plurality of disks the unit of data is stored.

60. (Amended) At least one computer readable medium encoded with instructions that, when executed on a computer system perform a method of processing data, wherein the computer system comprises at least one host and at least one storage system, the method comprising acts of:

(a) receiving, at the at least one storage system, a first request from the at least one host to access a unit of data, the request having an identifier that can be used to access the unit of data; and

(b) in response to the first request, returning to the at least one host an identifier that can be used to access the unit of data and additional information, separate from the identifier, related to where the unit of data is physically stored on the at least one storage system; and

(c) receiving a second request to access the unit of data, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system.

61. (Amended) The at least one computer readable medium of claim 60, wherein the first request to access the unit of data includes a request to write the unit of data and the act (a) further comprises acts of receiving the unit of data from the host and storing the unit of data at a storage location of the storage system.

62. (Amended) The at least one computer readable medium of claim 60, wherein the method further comprises an act of [receiving a second request to access the unit of data, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system] using the information related to where the data is physically stored on the storage system received in the act (c) to retrieve the unit of data.

63. (Original) The at least one computer readable medium of claim 60, wherein the at least one storage system includes a plurality of storage nodes and wherein the information related to where the unit of data is physically stored on the at least one storage system includes information related to on which of the plurality of storage nodes the unit of data is stored.

64. (Original) The at least one computer readable medium of claim 60, wherein the at least one storage system includes a plurality of storage nodes, at least some of the plurality of storage nodes including a plurality of disks, and wherein the information related to where the unit of data is physically stored on the storage system includes information related to on which of the plurality of disks the unit of data is stored.

65. (Amended) A storage system for use in a computer system, including the storage system and at least one host, the storage system comprising:

at least one storage device to store data received from the at least one host; and

at least one controller that:

receives, at the at least one storage system, a first request from the at least one host to access a unit of data, the request having an identifier that can be used to access the unit of data; and

in response to the first request, returns to the at least one host an identifier that can be used to access the unit of data and additional information, separate from the identifier, related to where the unit of data is physically stored on the at least one storage system.

wherein the at least one controller receives a second request to access the unit of data, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system.

66. (Amended) The storage system of claim 65, wherein the first request to access the unit of data includes a request to write the unit of data, and the at least one controller receives the unit of data from the host and stores the unit of data on the at least one storage device.

67. (Amended) The storage system of claim 65, wherein the at least one controller [receives a second request to access the unit of data, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system] uses the information received in the second request to retrieve the unit of data.

68. (Original) The storage system of claim 65, wherein the at least one storage device comprises a plurality of storage nodes, wherein the information related to where the unit of data is physically stored on the at least one storage system includes information related to on which of the plurality of storage nodes the unit of data is stored.

69. (Original) The storage system of claim 65, wherein the at least one storage device comprises a plurality of storage nodes, at least some of the plurality of storage nodes including a plurality of disks, wherein the information related to where the unit of data is

physically stored on the storage system includes information related to on which of the plurality of disks the unit of data is stored.

70. (Amended) A method of processing data in a computer system comprising at least one host and at least one storage system, the method comprising acts of:

(a) sending, to the at least one storage system, a first request from the at least one host to access a unit of data, the first request having an identifier that can be used to access the unit of data; [and]

(b) receiving, from the at least one storage system, an identifier that can be used to access the unit of data and additional information, separate from the identifier, related to where the unit of data is physically stored on the at least one storage system; and

(c) sending a second request to access the unit of data from the at least one host to the at least one storage system, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system.

71. (Amended) The method of claim 70, wherein the first request to access the unit of data includes a request to write the unit of data and the act (a) further comprises acts of sending the unit of data from the at least one host for storage at a storage location of the storage system.

72. (Cancelled).

73. (Amended) At least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data, wherein the computer system comprises at least one host and at least one storage system, the method comprising acts of:

(a) sending, to the at least one storage system, a first request from the at least one host to access a unit of data, the first request having an identifier that can be used to access the unit of data; [and]

(b) receiving, from the at least one storage system, an identifier that can be used to access the unit of data and additional information, separate from the identifier, related to where the unit of data is physically stored on the at least one storage system; and

(c) sending a second request to access the unit of data from the at least one host to the at least one storage system, the second request including the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system.

74. (Amended) The at least one computer readable medium of claim 73, wherein the first request to access the unit of data includes a request to write the unit of data and the act (a) further comprises acts of sending the unit of data from the at least one host for storage at a storage location of the storage system.

75. (Cancelled).

76. (Amended) A host computer for use in a computer system including the host computer and at least one storage system, the host computer comprising:

at least one storage device; and

at least one controller that:

sends, to the at least one storage system, a first request from the at least one host to access a unit of data, the request having an identifier that can be used to access the unit of data; and

in response to the first request, receives from the at least one storage system an identifier that can be used to access the unit of data and additional information, separate from the identifier, related to where the unit of data is physically stored on the at least one storage system, and stores the additional information on the at least one storage device;

wherein the at least one controller is adapted to send, along with a second request to access the unit of data from the at least one host to the at least one storage system, the identifier associated with the unit of data and the information related to where the data is physically stored on the storage system

77. (Amended) The host computer of claim 76, wherein the first request to access the unit of data includes a request to write the unit of data and the at least one controller sends the unit of data from the at least one host to the at least one storage system.

78. (Cancelled).

Allowable Subject Matter

4. Claims 1-32, 34-40, 42-48, 50-71, 73-74, and 76-77 are allowed.

5. Claims 33, 41, 49, 72, 75, and 78 are cancelled.

6. The following is an examiner's statement of reasons for allowance: This application refers to an invention in which the storage system provides a location hint to the host of where the data is physically stored, which the host can resubmit with future access requests. The examiner attended an Applicant-initiated telephonic interview, where the applicant brought up a possible amendment to the claims that would make the claims novel. Upon review of the proposed amendments, the Examiner agreed that the proposed amendments were almost in condition for allowance. The Examiner then made a final Examiner Amendment for claims 1-3, 6, 8, 11-13, 16, 18, 21-23, 26, 28, 31-33, 36-37, 39-42, 44-45, 47, 49, 50, 52-57, 60-62, 65-67, and 70-78 as shown above.

7. Independent Claims 1, 11, 21, 31, 39, 47, 55, 60, 65, 70, 73, and 76 differ only in being different embodiments of the invention (method, system, or apparatus). Otherwise, the aforementioned claims teach the same concepts. The allowability of Claim 1 will be discussed in detail, with the explanation applying to Claims 11, 21, 31, 39, 47, 55, 60, 65, 70, 73, and 76 as well. The scope of Claim 1 includes a method that stores the data of a host, receives a first request to return host information correlating to the physical location of a unit of data. The

novelty of the invention continues with the next part of the claim, which includes (after the first request) receiving, at the at least one storage system, a second request to access the unit of data, the second request including the information related to where the unit of data is physically stored on the storage system. The fact that this invention necessitates a first and second request in order to successfully process the data in the manner denoted in Claim 1 makes this invention original.

8. All other claims dependent on Claims 1, 11, 21, 31, 39, 47, 55, 60, 65, 70, 73, and 76 are therefore in condition for allowance due to their dependence on the allowable parent claims.

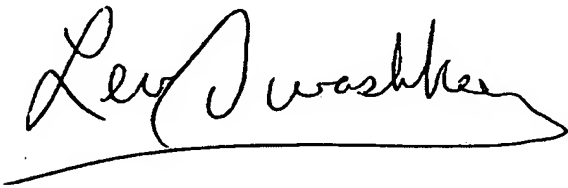
9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lev I. Iwashko whose telephone number is (571)272-1658. The examiner can normally be reached on M-Th from 8AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571)272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Lev Iwashko", with a long horizontal flourish extending to the right.

Lev Iwashko

A handwritten signature in black ink, appearing to read "Matthew Kim", with a long horizontal flourish extending to the left.

MATTHEW KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100